Firms and their distressed banks

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FIRMS AND THEIR DISTRESSED BANKS LESSONS FROM THE NORWEGIAN BANKING CRISIS 1988-1991)

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Introduction

Many economists maintain that large-scale interruptions in bank lending activities can propagate negative shocks to the real sector. For example, Bernanke (1983) argues that the systematic failure of banks exacerbated the decline in the U.S. economy

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during the Great Depression and Slovin, Sushka and Polonchek (1993) show that firms borrowing from Continental Bank suffered large atock price declines upon its collapse in 1984. More recently, Hoahi and Kashyap (2000), Morck and Nakamura (2000), and Bayoumi (19991 lay at least partial blame for Japan's current economic malaise on system-wide disruptions in bank lending that began in the early 1990s. All of these researchers maintain that market imperfections prevented firms from obtaining valuable financing once their banks became distressed.

A second set of economists view banks as performing functions that are either substitutable or enhanced by capital markets. Some of these researchers, exemplified by Black (1975), Fama (1980), and King and Plosser (1984), see nothing special about the services provided by banks and reason that the causality of any correlation between the health of the banking system and economic activity runs from the real sector to banks. Still others link the importance of banks to the structure of the financial system in general. For instance, Greenspan (1999) suggests that countries most susceptible to banking shocks are those that lack developed capital markets. He reasons that countries with well-developed capital markets insulate borrowers by providing good substitutes when banks stop lending. Similarly, Rajan and Zingales (1998) argue that sufficient competition from capital markets prevents banks from misallocating funds to unprofitable investment projects and mitigates the impact of a financial crisis on the real sector.

To shed some new light on this debate, we investigate the coats of bank distress using the Norwegian banking crisis of 1988-1991 as our laboratory of study. The data compiled for this paper permit us to directly link Norwegian banks to their commercial customers. Using these links, we measure the impact of bank distress announcements upon the stock price of firms related to the troubled banks. Our sample covers 90% of all commercial bank assets, and nearly all exchange-listed firms in Norway. This affords us tha opportunity to track the influence of the near-collapse of a banking system on a large segment of the economy. The data also enable us to conduct a controlled test of the direction of causality running between the health of banks and the performance of their customers. The deterioration in bank assets during the crisis resulted primarily from failures of small businesses that are unrelated to the exchange-listed companies in our study, which were relatively healthy at the outset of the crisis.

There are a number of reasons why the Norwegian banking crisis presents an ideal setting for studying the impact of bank distress on firm performance. First, the crisis was systemic and economically significant. During the crisis years, banks representing 95% of all commercial bank assets in Norway became insolvent, forcing the closure of one bank and the bailout of numerous other financial institutions, including Norway's three largest commercial banks. Bank managers were fired, employees

were laid off, and listed banks lost over 00% of their equity value. Second, banks are a primary source of funds to companies in Norway. Most of the commercial debt in Norway is raised through bank loans, and many firms maintain a relationship with only one bank. This assures that we isolate the impact of bank impairment on each firm'a primary, if not only, source of debt financing. Third, although bank-dominated on the credit aide, Norway's corporate governance system contrasts starkly with other bank-centered economies such as Japan and Korea that have recently experienced financial crises. In particular, regulatory and legal restrictions in Norway keep significant control rights out of the hands of banks, and tend to favor the protection of minority equity shareholders.

Our evidence suggests that announcements of bank distress during the Norwegian banking crisis had little impact on the welfare of firms maintaining relationships with the troubled banks. On an event-by-event basis, banks experienced an average cumulative abnormal return (CAR) of -10.6% in the three days surrounding their distress announcement and -11.7% over a longer, seven-day window. Meanwhile, firms maintaining relationships with these distressed banks experienced an average 3-day CAR of -1.4% and 7-day CAR of +1.7% around the same event dates. He show that these results are insensitive to the choice of benchmark, averaging method, and various other empirical robustness tests. The rest of the paper is organized as follows. Section 2 details the major events surrounding the Norwegian banking crisis. Section 3 discusses the data and introduces the event study methodology used in our paper and Section 4 contains the event study results. Section 5 concludes.

II. The Norwegian Banking Crisis

On March 18th 1988, Sunnmersbanken, a small commercial bank in western Norway, issued an earnings report warning that it had lost all of its equity capital. This event marked the beginning of the Norwegian Banking Crisis, a four-year period in which 13 banks representing over 95* of the total commercial bank assets 14 Norway, either failed or were seriously impaired. The crisis unfolded along the lines of a "classic financial panic" as described by Kindleberger (1996). A *displacement* - substantial and rapid financial deregulation in the mid-1980s - ignited *overtrading* in the form of a boom in bank lending. In the mid>t"'•;-. of the credit expansion, a sudden decline in oil prices precipitated a fall in asset values. Many weak firms went bankrupt, imperiling the banks tied to the failing firms. This led to revulsion in trading in the form of reduced bank lending throughout the economy.

Banking deregulation began in earnest in 1984. Prior to that year, Norwegian authorities limited both the quantity and rates at which Norwegian banks could lend. In 1984, authorities

relaxed reserve requirements, allowed subordinated debt to be counted as bank capital, and opened Norway to competition from both foreign and newly-established Norwegian banks. Over the next two years, the Norwegian government lifted all interest rate declarations, phased out bond investment requirements, consolidated bank oversight responsibilities under the Banking, Insurance, and Securities Commission (hereafter BISC), and further relaxed restrictions on competition by permitting foreign banks to open branches in Norway. To compete for market share in the newly deregulated environment, banks aggressively expanded lending. Between 1964 and 19B6, the volume of lending by financial institutions to firma and households in Norway grew at an annual inflation-adjusted rate of 12%, roughly three times the average growth rate in the years prior to deregulation. A large portion of this growth came from new banks, small commercial banks, and savings banks.

The rapid expansion in credit ended in 1987 as bank loan losses began to accumulate. During 1986, the price *at* North Sea Brent Blend crude oil fell from $27 a barrel to $14.50 a barrel, precipitating a sharp decline in asset values in the oil-dependent Norwegian economy. Real bank loan growth slowed to 3.6% in 1988 and 2.8% in 1989, Existing loans to cyclically sensitive firms also came into jeopardy. Aa indicated in Table 1, total bankruptcies in Norway increased from 1,426 establishments in 1986 to 3,891 in 1988 and 4,536 in 1989. Host of the bankruptcies were small firms concentrated in the real estate, transport, construction, retail store, fishing, hotel, and restaurant industries. Paralleling these failures, commercial loan losses, measured as a percentage of total bank assets, rose from a level of 0.47% in 1986, to 1.57% in 1988, and 1.60% in 1989. The transition from a tightly regulated economy to a more competitive financial marketplace most likely accentuated these losses because of poor decision-making, high risk-taking, and outright fraud in bank lending. Sunnmarsbanken was the first to announce insolvency. During 1988-89, similar announcements followed from three other small commercial banks and four savings banks. All of these banks were located in northern or western Norway, the regions in which most business failures were occurring.

At the outset of the crisis, the Norwegian government had no formal program for shoring up the capital of troubled banks, nor did it sponsor any form of deposit insurance. Instead, the banking industry managed its own deposit insurance programs. It was these programs - the Commercial Bank Guarantee Fund (CBGF) and Savings Bank Guarantee Fund (SBGF) - which first injected capital into the troubled banks. Under the guidance of the BISC, the CBGF injected NOK 1.3 billion ($65 million) into the impaired banks and arranged for most of them to be merged with healthier banks. One exception was the insolvent Norion, a newly-formed commercial bank that came under investigation by the SISC for fraud in May 1989. The CBGP denied funding to Norion beyond the amount needed to cover liabilities of existing depositors, forcing the government

to take over the stricken bank. Within six' months, the government had shut the bank down and put its remaining assets under direct administrative control. By Spring 1990, capital injections from the CBGF and consolidations proposed by the BISC appeared to put to rest the outbreak of bank insolvencies. *Aftenpostea,* the largest newspaper in Norway, proclaimed on March 16, 1990 that the "Norwegian banking industry had weathered its worst difficulties" and that "the losses appear now to have flattened out."

The optimism, however, was premature. Uncertainty created by the Persian Gulf Crisis, weaknesses in global financial markets, and economic downturns in Sweden and Finland diminished the ability for Norwegian banks to borrow abroad. Newspapers began to report that Norway's three largest commercial banks were in trouble. Early in December 1990, Norway's third largest commercial bank, Fofcus, announced large losses due primarily to the poor performance of its existing loan portfolio. It had recently acquired two of the original troubled commercial banks'. Later in December, Norway's second largest commercial bank, Christiania Bank, announced an unexpected upward adjustment in loan losses, and requested an injection of capital by the CBGF. Christiania Bank had earlier acquired Sunnmørsbanken, the bank to first announce failure. Within two weeks of the Christiania Bank news release, Norway's largest commercial bank. Den norske Bank, also announced an upward revision in its loan loss estimates. All three of the banks publicly recognized that funds previously available through international markets had now dried up or become prohibitively expensive. The magnitude of the losses at Fokus Bank became apparent in February 1991 when the CBGF announced that a bailout of the bank had depleted nearly all of the remaining capital in the private insurance fund.

Without further aid, the entire banking system was in danger of collapsing. On March 5, 1991, the Norwegian parliament allocated Kr 5 billion to establish the Government Bank Insurance Fund (GBIF). The money in the GBIF was made immediately available for use by the CBGF to finish the bailout of Fokus Bank and to begin injecting capital into Christiania Bank. Shortly after the establishment of the GBIF, Den norske Bank announced that it would also need a large capital infusion to sustain operations. By the Fall of 1991, it became clear that the Kr 5 billion used to start the GBIF would be inadequate for bailing out ail three of Norway's largest banks.

After six months of debate on to how to resolve the worsening crisis, the Norwegian parliament increased the size of the GBIF, created a new fund called the Government Bank Investment Fund, and amended existing laws to force each ailing bank to write down its equity capital. This effectively allowed the Norwegian government to step in and take control of the three banks. In late-.1991, the total size of the government's guarantee funds quadrupled to Kr 20 billion (an amount equal to 3.4* of GDP) and the Norwegian government completely took over Fokus and Christiania banks and gained control of 55% of Den norske Bank. c;S

By 1992, the crisis had not only taken its toll on the Norwegian banking ayatem, but had also spread to other Nordic countries. In Norway, only eight domestic commercial banks remained in operation and 85% of the qountry' e commercial bank assets were under government control. Most large savings banks, mortgage companies, and finance companies had also experienced record losses during the period, and in 1993, Norway's largest insurance provider was forced into government stewardship. Sweden and Finland experienced similar patterns of distress as bank loan losses in 1992 climbed to over 5% of total bank assets and authorities in each country took unprecedented steps to rescue ailing banks (see Drees and Pazarbasioglu (1995)).

Three points should be made about the Norwegian banking crisis. First, responses to the unfolding crisia were unclear ex-aate, making it unlikely that investors could have predicted the *ex-post* outcomes. Ho bank had failed in Norway since 1923 and the Norwegian government had taken a 'hands-off" approach to insuring depositors against failure. Moreover, bank representatives made it clear at the beginning of the crisis that state intervention was unnecessary, if not undesirable. ! For instance. Tor Kobberstad, head of the Norwegian Bankers Association (*Bankforeningen*), stated in October 1989,

> A bank that is poorly managed should not be allowed to continue on forever, it sets a bad precedent for the industry. If we're going to maintain a private banking system, we should do it through resources from banks within the system. 'One should be extremely careful about trying! to solve problems through state assistance (*Dagens* Neringsliv, 10/26/69).

Second, government intervention led to disruptive changes at the distressed banks. The first time the government stepped in, it liquidated Norion Bank. In exchange for an injection of capital, the GBIF required ailing banks to write down their capital, replace management, cut coats, and scale back their branch networks. Subsequent control of the three largest banks indeed led to dismissal of the boards of directors and top management at both Fokue and Christian! a Bank. Third, the impact of the crisis on the banking industry has been long lasting. As of September 2000, the Norwegian Government continued to hold large or controlling stakes in Norway's two largest commercial banks. Moreover, the stock market value of Norwegian banks did not recover to their pre-crisis levels until the summer of 1997.

III. Data and Event Study Methodology

Given the history of the Norwegian banking crisis, we now turn to the data and methodology used to analyze the impact of

bank distress announcements on the stock prices of firms maintaining relationships with distressed banfts,

Relationship, announcement, and stock price data

We start with a time-series of firm-bank relationships compiled by Ongena and Smith (2000). For their study, Ongena and Smith (2000) collect annual information on the identity of bank •L>, relationships maintained by non-financial firms listed on the OSE between, 1979 and 1995. The sample covers, on average, 95* of all non-ban)c firms listed on the OSE during that period. Although .?, these firms represented less than 0.10% of the total number of ; incorporated companies in Norway, their book equity value in 1995 accounted for 21% of total corporation equity, and their market value equaled 45% of GDP (Bøhren and Odegaard (2000)). The sampl* firms maintained relationships with a total of 55 different banks, including 24 Norwegian commercial banks, 15 international commercial banks, and 17 Norwegian savings banks. During an average year, 74% of the firms maintained a relationship with only one bank and only 2% maintained four or more bank relationships. ..

Table 1 provides an annual overview of the turnover in bank relationships, along with the total number of firms listed on the OSE, the total number of bankruptcies across all firms in Norway, and the number of firms delisting from the OSE each year, from 1980 to 1995. During this period the OSE listed an average of 130 firms. The number of firms going public increased markedly during. the early 1980s, a period in which substantial deregulation and modernization occurred in the stock market, including the lifting of prohibitions on foreign purchases of equity in 1984 and in the introduction of U.S.-styled insider trading regulations in 1985. With the exception of 1990, delistings of OSE firms remained •; relatively constant throughout the crisis period even as total bankruptcies in the country rose. In fact, the net number of firms listing on the OSE grew each year after 1990. The average number of firms starting new bank relationships and ending existing relationships tripled during the years 1986-1988, compared to the average turnover in prior years. Beginning in 1989, firms scaled back on the number of bank relationships they . terminated, but continued to add new relationships at a rate triple to that prior to deregulation.

He match the Ongena and Smith (2000) relationship data with a set of announcements of distress made by banks involved in the Norwegian banking crisis. We start with a list of all crisis-related bank announcements that appeared on the OSE wire service or in the annual reports of governmental and quasi-governmental agencies, compiled by Kaen and Michalsen (1997). To this list we add announcements appearing in major Norwegian newspapers during the crisis period- We then define an event to be the date that the first material announcement of distress by a bank appears in one of our news sources. Such an announcement commonly includes a statement about severe loan losses, inadequate reserves, or large capital losses. We obtain thirteen announcements covering a

period between March 1988 and January 1991. To these we add the announcement on June 17, 1991 that both Den norske Bank and Christiania Bank had requested an injection of capital via government-purchased preferred equity. This request was the first indication that the magnitude of losses at Norway's two **largest** banks outstripped the existing capital of the government guarantee fund, and was the effective atart of a series of highly publicized parliamentary and newspaper debates discussing the prospect for rescuing the **banking** system. In matching the bank announcements with firm-bank relationships, we require the distressed bank to be associated with at least one firm from the Ongena and Smith (2000) database. Because some of the distressed banks did not service publicly-traded firms, our criterion leaves us with five banks and six distress events. In 1990, these five banks maintained relationships with 108 OSE listed firms, representing 96% of the firms in our sample at that time.

We refer to firms that maintain a relationship with a distressed bank as 'related firms" and. those that maintain relationships with non-distressed banks as "unrelated firms*. He obtain a total of 217 related firm observations and 447 unrelated firm observations across the six events.

For the analysis, we also require ownership, financial and stock price data. For these data we rely on JUerulf's ***Handbook*** and data supplied by Oslo *Bars* ***Informasjon,*** an information subsidiary of the OSE. Our analysis requires that we have a complete stock price history for the firms in the 291 trading days surrounding the distress event and complete accounting information in the year prior to the event. With these screens in place, we are left with 169 related firm observations and 267 unrelated firm observations.

He report results using both a value-weighted index of all OSE stocks and a "world* market index as measures of the benchmark market return. To construct the world market index, we gather from Datastream the value-weighted returns from the US, Japanese, UK, and German stock market indexes. Bach country receives a weight in the world index proportional to its DS dollar market capitalization as of July 1st, 1987. Judging abnormal returns relative to a world market index sidesteps biases in the OSE created by the correlation between the Norwegian economy and the banking crisis. For example, estimates of event-day abnormal returns will be biased upward if the Norwegian stock market falls on news correlated with a bank's **announcement** of distress.

Event Study **Methodology**

To obtain estimates of abnormal returns, we run market model regressions of the realized daily stock return for event portfolio j, r_{jt}, on a measure of the realized daily return of the market index, r_H, and a set of 2T * i daily event dummies, δ_{jkt}, k » $-r$, -*W, _, 0, _., r-l,r, which take the value of one for days inside the event window (t = k), and zero outside the **window,**

$$\sum \delta_j$$

The coefficients f_{jk} measure the daily abnormal returns inside t event window. For the results reported in the tables, we start the estimation 150 days prior to the start of the event window, include up to 40 days inside the window, and end the estimation 100 days after the event window. Because non-trading of stocks a common problem on the OSE, we check all our results by adding three lead and lagged values of the market index to correct for non-synchronous trading. Sums of the daily abnormal return estimates γ_{jk} over various windows yield cumulative abnormal ret (CAR) estimates, which can be tested for significance using a H te:

Impact of Bank Distress Announgg

This section presents the event study results by first documenting the impact of distress announcements on the banks themselves. By first studying the stock price reaction of the troubled banks to the distress announcements, we can jointly gauge the informativeness of the chosen event dates and the economic magnitude of the announcements.

Table 2 reports individual and average bank CARS using both the OSE index and the world market index over various windows surrounding announcements of distress. Because the two benchmarks generally produce similar CAR estimates, we focus in the text on estimates measured relative to the world market index. Stock price data for Sparebanken Nord-Norge are not available before 1994, so this bank is excluded from Table 2.

To summarize the CAR estimates across events, we report averages using two different methods. The first takes a simple average of the CARs, assumes that the estimates are independent across events, and uses a t-test-to judge significance. The second method uses a seemingly unrelated regression (SUR) framework that jointly incorporates all of the announcements assuming that the price impact across banks is equal. The latter method averages the individual bank estimates using weights proportional to the standard deviation of the event-specific error terms (see Thompson (1985)).

From a distressed bank's perspective, the events had a substantial impact on stock price. Across the events, the po»t event CARS are negative, large, and statistically significant!. suggesting that our event date choices were surprising to investors. For instance, the stock prices of Den norske Bank and Christiania Bank were increasing over the 10 days prior to their bailout request on June 17, 1991, but fell more than 9% immediately after the announcement was made. On average, the set of distressed banks earned zero abnormal returns leading up to the distress event and experienced an announcement-day decline of

roughly 10% that persisted beyond the 10 day post-announcement window. These averages are not only statistically significant, but economically meaningful. For example, on an aggregate basis, the (-1, +1) and (-3, +3) event windows capture 38% and 56%, respectively, of the total price fall in Norwegian bank stocks over the period 1988-1991.

He now turn to examining the abnormal returns of the related firms around bank distress announcements. Table 3 reports event-specific CAR estimates based upon equally weighted portfolios of related firms, grouped by event, and average CARS across all events. The signs and magnitude of the related firm portfolio CARs tend to be more mixed across events than the bank CARs. Over the <-l, +1) event window, borrowers from Sparebanken Nord-Norge fell by 26%, while firms related to Sunnmørsbanken and Fokus Bank declined by 6%. However, over the longer (-3, +3) and (0, +10) windows, "reversals* can be observed in returns for firms related to Sunmørsbanken and Sparebanken Nord-Norge. That is, their cumulative abnormal returns are higher over these longer event windows than for the 3-day event window. This volatility is not surprising given that only 5 firms are associated with these two banks, and customers of these smaller banks tend to be smaller and risky themselves. Firms related to Christiania Bank and Den Norske Bank suffered less upon their banks' first announcement of distress. These borrowers experienced abnormal price drops that averaged -2.5% over the short (-1, +1) window, zero over the (-3, +3) window, and slightly positive for the (0, +10) period. Moreover, these same firms experienced a relatively mild 3-day decline of -0.3% - while their banks experienced their largest stock price decline - upon the announcement that bank losses exceeded the existing capital of the government guarantee fund. Over longer windows, related firm stock prices once again tended to bounce back.

To get a consistent view of the aggregate impact of these distress announcements on the related firms, the bottom of Table 3 reports the average CARs across all firms. To create the average, we first estimate the market model regression on a firm-by-firm basis and calculate the mean CAR across all 169 firm estimates. Then, in order to control for the cross-sectional dependence in CAR estimates, we generate standard errors from bootstrapped distributions that preserve the cross-sectional dependence in the market model error terms ε_{it} for firms with event dates that overlap in time (the Appendix of the more detailed version of this paper contains a description of the bootstrap procedure).

Using the bootstrapped errors, the average 3-day CAR estimate is a statistically significant -1.4%. Assuming that this estimate represented a permanent change in the average value of an OSE firm would imply a total wealth loss of NOK 3.6 billion (measured in 1990 Norwegian Kroner) on the, OSE. Such a loss amounts to about 1/5 of the bailout paid by the Norwegian government to the depositors at Norway's two largest banks, and about 1/20 of the total estimated losses experienced by banks

between 1968 and 1992. Thus, the negative 3-day abnormal return, if permanent, would be economically small. But because the firm prices tend to reverse themselves, the negative stock price reaction is temporary. Over the 7- and ID-day event windows, the average CARs are +1.7% and +1.4% and statistically insignificant.

At tine bottom of Table 3, we also report an estimate that. judges the'performance of related firms relative to unrelated firms over the event period. Specifically, we construct a firm'-[1]-weighted "difference" portfolio that assumes that investors can form a zero cost portfolio before the event date that is long in related firms and short in unrelated firms. To create the portfolio,,; each firm receives a weight that is proportional to the total nurabfer of firms in the sample that year. The difference portfolio CAR estimates suggest that the stock prices of related firms fall, by more than those of unrelated firms on event dates, but that the difference is not statistically significant.

V. Conclusion

The Norwegian banking system was in deep financial trouble between 19)18 and 1991. Loan losses exhausted capital at many banks, private deposit insurance funds went broke, the banking sector nearly collapsed, and Norway's largest banks were ultimately nationalized. Nevertheless, the average firm maintaining a bank relationship with a distressed bank faced only small and temporary downward revisions to its stock price on the announcement of their banks' distress. In fact, stock prices of publicly-listed companies grew over the event period, outstripping the average returns on other exchanges around the world. Our results suggest that bank distress caused no significant \ interruptions to the financing and investment abilities of exchange-listed Norwegian firms despite the fact that these firms were heavily reliant on bank debt as a source of bank financing.

In the more detailed version of this paper, we argue that because the Norwegian financial system leans towards protections for minority shareholder rights and transparent accounting and disclosure, banks are unable to consistently establish strong control rights over firms in Norway like they can in Japan. Instead, investors in Norway work through a well-functioning equity market to control firms in a way that maximizes shareholder value. As direct evidence for this argument, we show that Norwegian firms issued equity more often, and in greater amounts, than Japanese firms - even when the Japanese stock market was at its peak. Cross-sectional regressions strengthen the argument by demonstrating that Norwegian firms with access to liquid funds or that issued equity prior to the banking crisis experienced relatively high abnormal returns.

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TABLE 1

Annual Overview of Firms and Their Bank Relationships

Year	Firms listed on the OSE	Bank relation-ships started	Bank relation-ships terminated	Bankruptcies across all firms	Delistings from the OSE
1980	109	5	5	765	10
1981	112	2	1	810	2
1982	117	3	4	955	1
1983	136	5	5	1,236	2
1984	158	7	5	1,304	0
1985	159	6	1	1,340	6
1986	154	17	***	1,426	12
1987	143	14	10	2,075	15
1988	129	18	12	3,891	17
1989	130	11	6	4,536	11
1990	114	14	7	3,814	24
1991	117	14	9	4,926	11
1992	121	16	5	5,749	7
1993	125	10	4	5,158	12
1994	131	14	5	3,634	11
1995	133	10	6	3,500	18
Mean	129.5	10.4	6.3	2,820	9.9

TABLE 2

Cumulative Abnormal Returns, Distressed Banks

Bank (Event Date)	Market latex	(-10, -1)	•mat to, +10)	Window (-3,+3)	, (-1,+1)
Sunmrorebanken (03/18/88)	06B	0.057 (0.022)	0.073 (0.008)	0.067 (0.000)	-0,026 (0.001)
	World	0.059 (0.019)	0.067 (0.012)	0.070 (0.000)	-0.028 (0.000)
Fokus Bank (12/11/90)	OSE	-0.031 (0.199)	-0.363 (0.000)	-9.173 (0.000)	-0.148 (0.000)
	World	-0.037 (0.129)	-0.3B7 (0.000)	-0.239 (0.000)	-0.192 (0.000)
ChriBtiania Bank (12/20/90)	OSB	-0.024 (0.256)	-0.061 (0.011)	-0.082 (0.000)	-0.074 (0.000)
	World	-0.107 (0.000>	-0.074 (0.005)	-0.095 (0.000;	-0.115 (0.000)
Den Norske Bank (01/04/91)	OSB	-0.123 (0.000)	-0.040 (0.075)	-0.124 (0.000)	-O.OB5 (a nnni
	World	-0.134 (0.0*00)	-0.069 (0.002)	-0.108 (0.000)	-0.104 (0.000)
ChriBtiania Bank (06/17/91)	OSB	0.29* (0.000)	0.000 (0.990)	-0.150 (0.000)	-0.064 (0.000)
	world	0.260 (O.OOO)	0.028 (0.316)	-0.120 (0.000)	-O.OS3 (0.000)
Den Norske Bank (06/17/91)	OSB	0.149 (0.000)	-0.102 (0.030)	-0.303 (0.000)	-0.149 (0.000)
	World	0.197 (a.oont	-0.067 (0.188)	-0.259 (0.000)	-0.138 (0.000)
Average across All Events	OSB	0.013 (0,608)	-0.DBS (0.290)	HK10T (0.0*7)	-0,088 (0.011
	world	a.ooi (6.»79)	-0.096 (0.277)	;(o'.»*)	-0.106 (0.015)
SOR Regression acrosa All Events	OSB	-0.024 (0.561)	(e!«5)	0.136 [0.000]	-0.096 (0.000)
	World	-0.036 (0.370)	-0.1IB (O.OOS)	-0/137 (0.000)	-6.116 (0.000)

p-values are in parentheses

TABLE

At 1 Retu: Reia *•me*

Event	N	Market Index			Window	
mørsbanke ia/fl8)			**-0.070** **(0.0061**	**0.088** 10.002		-0.079 ;0.000i
Sparebanken Nord-Norge (10/08/89)			1D1	74 10'	0.019	
Fok Bank *til* 1/90)		Horia	0.011 **0.057**	**038** 001	000:	
Chr: Baal			3.015 0.001	**05** 0e: 014	**uzi** 000	
Den Borsk* Bank (01/04/91)		World	.035 0001 **043**		*939* JOO	
Christiania Bank and Den Horske Bank (06/17/9D				)04 :86	**).812)**	
Average **across** All **Related**	6 9		**).010** **0.366**		**009** **493**	**005** **280**
Pimi-weight! Difference Portfolio			0.01 **:0.9**	**91)**	**017** 5*5) **549**	**014,**

p-Vi **ues** are parentheses